

In the Claims:

1. (original) A hard sintered body indexable insert in which
2 a hard sintered body that contains cubic boron nitride by
3 20 vol % or more is brazed to a seating groove formed at a
4 corner of a tool substrate, and a ridge of the hard
5 sintered body is used as a cutting edge, the hard sintered
6 body indexable insert characterized in that at least a pair
7 of hard sintered bodies or composite hard sintered bodies
8 are disposed on upper and lower surfaces in a thickness
9 direction of the hard sintered body indexable insert; a
10 thickness of a part of the tool substrate between the pair
11 of seating grooves is within a range of 30% to 90% with
12 respect to a thickness of the hard sintered body indexable
13 insert; a length of a cutting edge of the hard sintered
14 body or of the composite hard sintered body is within a
15 range of 0.5 mm to 4.0 mm; and a bonding layer that has
16 been brazed contains 0.5 to 65 wt % Ti and/or Zr and
17 further contains Cu.

1. 2. (original) The hard sintered body indexable insert as
2 recited in Claim 1, wherein the hard sintered body or the
3 composite hard sintered body is 0.8 mm to 1.6 mm in
4 thickness per piece.

Claims 3 to 7 (canceled).

1 8. (currently amended) A manufacturing method for
2 manufacturing ~~a the~~ hard sintered body indexable insert
3 ~~according to claim 1, in which a hard sintered body that~~
4 ~~contains cubic boron nitride by 20 vol % or more is brazed~~
5 ~~to a seating groove formed at a corner of a tool substrate,~~
6 ~~and a ridge of the hard sintered body is used as a cutting~~
7 ~~edge, the manufacturing method comprising:~~

8 a step of preparing a paste-like brazing alloy by
9 mixing a powdery brazing alloy that contains 0.5 to 65 wt
10 % Ti and/or Zr and that further contains Cu with an organic
11 binder;

12 a step of bonding the hard sintered body or the
13 composite hard sintered body to a seating groove of the
14 upper surface of the tool substrate through the paste-like
15 brazing alloy and thereafter temporarily fastening the hard
16 sintered body or the composite hard sintered body by
17 evaporating a solvent component of the organic binder;

18 a step of bonding the hard sintered body or the
19 composite hard sintered body to a seating groove of the
20 lower surface of the tool substrate through the paste-like
21 brazing alloy and thereafter temporarily fastening the hard
22 sintered body or the composite hard sintered body by
23 evaporating the organic binder; and

24 a step of brazing and fixing the hard sintered body
25 indexable insert in which the hard sintered body or the
26 composite hard sintered body is bonded to tool substrate in
27 a vacuum or in an inert gas atmosphere.

In the Claims:

1 1. (original) A hard sintered body indexable insert in which
2 a hard sintered body that contains cubic boron nitride by
3 20 vol % or more is brazed to a seating groove formed at a
4 corner of a tool substrate, and a ridge of the hard
5 sintered body is used as a cutting edge, the hard sintered
6 body indexable insert characterized in that at least a pair
7 of hard sintered bodies or composite hard sintered bodies
8 are disposed on upper and lower surfaces in a thickness
9 direction of the hard sintered body indexable insert; a
10 thickness of a part of the tool substrate between the pair
11 of seating grooves is within a range of 30% to 90% with
12 respect to a thickness of the hard sintered body indexable
13 insert; a length of a cutting edge of the hard sintered
14 body or of the composite hard sintered body is within a
15 range of 0.5 mm to 4.0 mm; and a bonding layer that has
16 been brazed contains 0.5 to 65 wt % Ti and/or Zr and
17 further contains Cu.

1 2. (original) The hard sintered body indexable insert as
2 recited in Claim 1, wherein the hard sintered body or the
3 composite hard sintered body is 0.8 mm to 1.6 mm in
4 thickness per piece.

1 14. (previously added) The hard sintered body indexable insert
2 as recited in Claim 1, wherein the bonding layer contains
3 20 wt % to 30 wt % Ti and 20 wt % to 30 wt % Zr, and the
4 remainder of Cu and inevitable impurities.

1 9. (original) The manufacturing method as recited in Claim 8,
2 wherein the brazing alloy contains 20 wt % to 30 wt % Ti
3 and 20 wt % to 30 wt % Zr, and the remainder of Cu and
4 inevitable impurities.

1 10. (original) The manufacturing method as recited in Claim 8,
2 wherein the brazing alloy contains 0.5 wt % to 20 wt % Ti
3 and/or Zr, 10 wt % to 40 wt % Cu, and the remainder of Ag
4 and inevitable impurities.

1 11. (original) The manufacturing method as recited in Claim 8,
2 wherein the brazing alloy contains 0.5 wt % to 10 wt % Ti
3 and/or Zr, 5 wt % to 20 wt % In, 15 wt % to 35 wt % Cu, and
4 the remainder of Ag and inevitable impurities.

Claim 12 (canceled).

1 13. (previously added) The hard sintered body indexable insert
2 as recited in Claim 1, wherein the hard sintered body is
3 bonded directly to the tool substrate through the bonding
4 layer.

1 14. (previously added) The hard sintered body indexable insert
2 as recited in Claim 1, wherein the bonding layer contains
3 20 wt % to 30 wt % Ti and 20 wt % to 30 wt % Zr, and the
4 remainder of Cu and inevitable impurities.

1 15. (previously added) The hard sintered body indexable insert
2 as recited in Claim 1, wherein the bonding layer contains
3 0.5 wt % to 20 wt % Ti and/or Zr and contains 10 wt % to 40
4 wt % Cu and the remainder of Ag and inevitable impurities.

1 16. (previously added) The hard sintered body indexable insert
2 as recited in Claim 1, wherein the bonding layer contains
3 0.5 wt % to 10 wt % Ti and/or Zr, and contains 5 wt % to 20
4 wt % In and 15 wt % to 35 wt % Cu, and the remainder of Ag
5 and inevitable impurities.

1 17. (previously added) The hard sintered body indexable insert
2 as recited in Claim 1, wherein on a surface of the hard
3 sintered body indexable insert, there is formed a coating
4 layer comprising at least one element selected from the
5 group consisting of elements belonging to groups IVa, Va,
6 VIA in the periodic table and elements Al, Si, and B, or at
7 least one compound selected from the group consisting of
8 nitride, carbide, or oxide of at least one metal selected
9 from this group, and their solid solutions.

1 18. (previously added) The manufacturing method as recited in
2 Claim 8, further comprising a step of forming, on a surface
3 of the hard sintered body indexable insert, a coating layer
4 comprising at least one element selected from the group
5 consisting of elements belonging to groups IVa, Va, VIA in
6 the periodic table and elements Al, Si, and B, or at least
7 one compound selected from the group of nitride, carbide,

8 or oxide of at least one metal selected from this group,
9 and their solid solutions, according to a physical vapor
10 deposition method or according to a chemical vapor
11 deposition method.

[RESPONSE CONTINUES ON NEXT PAGE]